**Table S1. Genotyped genes**. Fifty-six genes were selected, divided in different categories according to their function.

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| **Gene Name** | **Chromosome/Location** | **Protein** |
| **Genes from angiogenesis signaling pathways** | | |
| *AKT1* | 14q32.32 | AKT serine/threonine kinase 1 |
| *CRK* | 17p13.3 | CRK proto-oncogene, adaptor protein |
| *EPO* | 7q22 | erythropoietin |
| *FGF2* | 4q26 | fibroblast growth factor 2 |
| *FGFR1* | 8p11.23-p11.22 | fibroblast growth factor receptor 1 |
| *FLT1* | 13q12 | fms-related tyrosine kinase 1 |
| *FLT4* | 5q35.3 | fms-related tyrosine kinase 4 |
| *FRS2* | 12q15 | fibroblast growth factor receptor substrate 2 |
| *GRB2* | 17q24-q25 | growth factor receptor bound protein 2 |
| *ITGAV* | 2q31-q32 | integrin subunit alpha V |
| *ITGB5* | 3q21.2 | integrin subunit beta 5 |
| *KDR* | 4q11-q12 | kinase insert domain receptor |
| *KRAS* | 12p12.1 | KRAS proto-oncogene, GTPase |
| *MAP2K4* | 17p12 | mitogen-activated protein kinase kinase 4 |
| *MAP2K6* | 17q24.3 | mitogen-activated protein kinase kinase 6 |
| *MAPK1* | 22q11.21 | mitogen-activated protein kinase 1 |
| *MAPK3* | 16p11.2 | mitogen-activated protein kinase 3 |
| *MAPK10* | 4q22.1-q23 | mitogen-activated protein kinase 10 |
| *MAPK11* | 22q13.33 | mitogen-activated protein kinase 11 |
| *MAPK14* | 6p21.3-p21.2 | mitogen-activated protein kinase 14 |
| *NOS3* | 7q36 | nitric oxide synthase 3 |
| *NRAS* | 1p13.2 | neuroblastoma RAS viral oncogene homolog |
| *NRP1* | 10p12 | neuropilin 1 |
| *PGF* | 14q24.3 | placental growth factor |
| *PIK3C2A* | 11p15.5-p14 | phosphatidylinositol-4-phosphate 3-kinase catalytic subunit type 2 alpha |
| *PIK3C2B* | 1q32 | phosphatidylinositol-4-phosphate 3-kinase catalytic subunit type 2 beta |
| *PIK3R5* | 17p13.1 | phosphoinositide-3-kinase regulatory subunit 5 |
| *PRKCA* | 17q24.2 | protein kinase C alpha |
| *PRKCE* | 2p21 | protein kinase C epsilon |
| *PLXDC2* | 10p12.31 | plexin domain containing 2 |
| *RAF1* | 3p25 | Raf-1 proto-oncogene, serine/threonine kinase |
| *VEGFA* | 6p12 | vascular endothelial growth factor A |
| *VEGFB* | 11q13 | vascular endothelial growth factor B |
| **Genes from additional signaling pathways that sorafenib targets** | | |
| *KIT* | 4q12 | KIT proto-oncogene receptor tyrosine kinase |
| *RET* | 10q11.2 | ret proto-oncogene |
| **Genes associated with pericyte survival** | | |
| *PDGFRα* | 4q12 | platelet derived growth factor receptor alpha |
| *PDGFRβ* | 5q33.1 | platelet derived growth factor receptor beta |
| **Genes associated with sorafenib disposition** | | |
| *CYP3A4* | 7q21.1 | cytochrome P450 family 3 subfamily A member 4 |
| *UGT1A9* | 2q37 | UDP glucuronosyltransferase family 1 member A9 |
| **Genes associated with sorafenib toxicity** | | |
| *BGLAP* | 1q22 | bone gamma-carboxyglutamate protein |
| *CDH13* | 16q23.3 | cadherin 13 |
| *EXPH5* | 11q22.3 | exophilin 5 |
| *PMF1* | 1q12 | polyamine-modulated factor 1 |
| *STK39* | 2q24.3 | serine/threonine kinase 39 |
| *WNK1* | 12p13.3 | WNK lysine deficient protein kinase 1 |
| **Genes associated with RCC prognosis/pathogenesis or general cancer prognosis** | | |
| *CA9* | 9p13.3 | carbonic anhydrase 9 |
| *EGFR* | 7p12 | epidermal growth factor receptor |
| *EPAS1* | 2p21-p16 | endothelial PAS domain protein 1 |
| *HIF1α* | 14q23.2 | hypoxia inducible factor 1 alpha subunit |
| *IL8* | 4q13.3 | interleukin 8 |
| *IL17A* | 6p12 | interleukin 17A |
| *IL17F* | 6p12 | interleukin 17F |
| *STAT3* | 17q21.31 | signal transducer and activator of transcription 3 |
| *TGFα* | 2p13 | transforming growth factor alpha |
| *VHL* | 3p25.3 | von Hippel-Lindau tumor suppressor |
| *WWOX* | 16q23 | WW domain containing oxidoreductase |